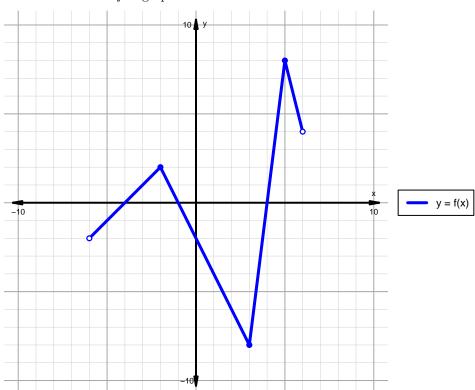
Intervals, Transformations, and Slope EXAM (version 176)

1. The function f is graphed below.

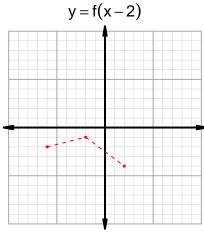


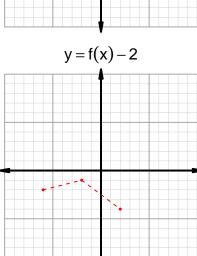
Indicate the following intervals using interval notation. Remember, you can use \cup between two intervals to indicate the union. Except for range, all intervals will indicate x values; this is standard.

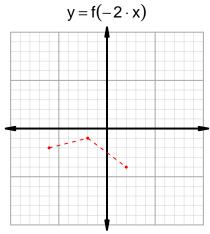
| Feature | Where |
|------------|-------|
| Positive | |
| Negative | |
| Increasing | |
| Decreasing | |
| Domain | |
| Range | |

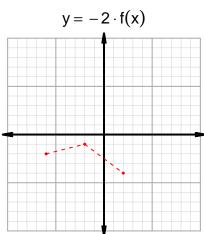
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2. In the four graphs below, y = f(x) is graphed as a dotted line. With a solid line, please graph the transformations indicated by the equations below.









3. Let function g be defined by the table below. Use the formula $\frac{g(x_2)-g(x_1)}{x_2-x_1}$ to find the average rate of change between $x_1=44$ and $x_2=69$. Express your answer as a reduced fraction.

| \overline{x} | g(x) |
|----------------|------|
| 44 | 68 |
| 68 | 69 |
| 69 | 88 |
| 88 | 44 |